DOCUMENT RESUME

ED 234 975 RC 014 381

AUTHOR Thompson, Alton; Traub, Betty J.
TITLE A Factor Analytic Model of Community and Life Satisfaction: The Case of North Carolina. No. 83-4.
INSTITUTION North Carolina Agricultural and Technical State Univ., Greensboro.
SPONS AGENCY Department of Agriculture, Washington, D.C.
PUB DATE Sep 83
GRANT NCX-061-5-79-150-1
NOTE 28p.; Paper presented at the Annual Meeting of the Rural Sociological Society (Lexington, KY, August, 1983).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Academic Achievement; Age; Blacks; *Community Satisfaction; Factor Analysis; *Individual Characteristics; *Life Satisfaction; *Models; Occupations; Poverty; *Poverty Areas; Racial Differences; Racial Factors; Rural Areas; *Rural Population; Whites
IDENTIFIERS *North Carolina

ABSTRACT

A multivariate model, refined by factor analysis, was formulated to investigate the degree of community and life satisfaction among a multistage cluster sample of 249 rural residents in 3 racially-mixed, low-income rural North Carolina counties. The sample was almost equally divided between black (49.8%) and white (50.2%) respondents. Analysis of covariance was used to assess statistical significance of hypothesized relationships between selected socio-economic variables (age, education, occupation, race, poverty status, farm status) and the composite criterion variable--community satisfaction. Findings indicated that (1) when the effects of the covariates were removed, race and poverty status had significant effects on community and life satisfaction, while the effect of farm status was minimal; (2) education emerged as the only significant covariate; and (3) there was no interaction among the factors, but three factor-covariate interaction terms were present. The "person characteristics" (race, poverty status, education) were highly significant on the index of community satisfaction although most earlier studies noted the contrary. Black and poor respondents tended to have lower levels of community and life satisfaction than white and nonpoor residents. (Author/MH)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED234975

A FACTOR ANALYTIC MODEL OF COMMUNITY AND LIFE SATISFACTION: THE CASE OF NORTH CAROLINA

By

Alton Thompson
Betty J. Traub

Greensboro, North Carolina

SEPTEMBER 1983 NO. 83-4

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Alton Thompson

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

RC014381

A FACTOR ANALYTIC MODEL OF COMMUNITY AND LIFE SATISFACTION: THE CASE OF NORTH CAROLINA*

This paper was presented at the Annual meeting of the Rural Sociological Society - August, 1983 - Lexington, Kentucky.

A FACTOR ANALYTIC MODEL OF COMMUNITY AND LIFE SATISFACTION: THE CASE OF NORTH CAROLINA[1]

ABSTRACT:

As the rich, descriptive studies on the quality of life have accumulated, a recurring observation is the recent concern with community and life satisfaction. Students of social indicators research are formulating and testing conceptual frameworks of community satisfaction in the hope of making intelligent decisions about social policy. At the same time, there has been a shift from a concern with only the objective conditions of society to include the subjective perceptions of life experiences. That is, the point at issue in most studies is to consider both the information about certain populations and subpopulations and the information about how the individuals within these populations feel about their circumstances or life conditions.

The purpose of the present study is to investigate the degree of community and life satisfaction among a multistage cluster sample of 249 rural residents. A multivariate model, refined by factor analysis, is formulated to extract commonalities from this multidimensional phenomenon. Then, analysis of covariance is used to assess the statistical significance of the hypothesized relationships between selected socio-economic variables (age, education, occupation, race, poverty status and farm status) and the composite, criterion variable - community satisfaction. Findings indicate that: 1) When the effects of the covariates are removed, race and poverty status were found to have significant effects on community and life satisfaction while the effect of farm status was minimal; 2) Education emerged as the only significant covariate; and 3) There was no interaction among the factors; however, three factor-covariate interaction terms were present.

INTRODUCTION

As the rich, descriptive studies on the quality of life have accumulated, a recurring observation is the recent concern with community and life satisfaction. Initially, social indicators research concentrated solely on the objective conditions of life as determinants of social change and reflections of people's viewpoints. For example, early studies utilized economic well-being as a primary indicator of quality of life. Studies have demonstrated

---

[1]This research was supported by the United States Department of Agriculture Research Grant No. NCX-061-5-79-150-1, The Isolation of Factors Related to Levels and Patterns of Living in Selected Areas of the Rural South.

that economic status is not a total measure of quality of life and there is a need to incorporate the personal assessments of those studied (Campbell and Converse, 1972; Rodgers and Converse, 1975). Consequently, recent studies have expanded their focii to include one's perceptions of his own well-being in the community. Further, Rojek et al (1975), Marans and Rodgers (1975) and Campbell et al (1976) contend that community satisfaction, as a social measure, is applicable to this combined approach (objective and subjective indicators).

The purpose of the present study is to investigate the degree of community and life satisfaction among a sample of rural, North Carolina residents. Our analysis follows Johnson and Knop's study to the extent that it broadens the concept of community satisfaction as a multidimensional construct refined by factor analysis. Then, community and life satisfaction, a composite measure, is examined for socio-economic differentials - age, education, occupation, race, poverty status and farm status.

Existing studies in this area of social indicators research revealed that the relationships between socio-economic variables and community and life satisfaction are, at best, tenuous and somewhat mixed. For example, Marans and Rodgers (1975) contended that "person characteristics" (i.e. age, education, income, race, etc.) had "extremely modest" effects on community satisfaction while Jesser (1967:64), Ladewig and McCann (1980:126) and Rojek et al (1975: 186-189) argued that these characteristics did not have statistically significant effects on community satisfaction. Further, in focusing their analysis on four, rural counties in north central Illinois, the latter authors found that the explanatory power of eleven objective, demographic, economic and status measures on four dimensions of community satisfaction (medical, commercial, public service and educational) failed to achieve statistical significance. In another study, Miller and Crader (1979:500-502) reported that the beta

coefficients of age, education and income for an economic dimension of community satisfaction were not significant while only education reached statistical significance on the interpersonal dimension of community satisfaction.

In sum, virtually no strong or consistent relationships were found between socio-economic variables and community and life satisfaction; however, these studies do demonstrate a need for a combined use of subjective and objective indicators to tap the attitudes of individuals toward human conditions.

METHODOLOGY

The data source, variables, and procedures used to obtain the findings pertaining to community and life satisfaction are as follows.

Data

The principal data source is a probability sample (N = 249) drawn from three racially mixed, low income, rural counties in North Carolina as part of a regional project entitled, "The Isolation of Factors Related to Levels and Patterns of Living in Selected Areas of the Rural South." A multistage cluster sampling procedure was designed to achieve a sample size representative of the population and proportionate to the size of each of the three counties.

In the first stage, the probability of a county's selection was to be in proportion to its population size within the state's sampling frame of low income, rural counties. For the second stage, national geological survey maps (2° series) with a 15 minute by 15 minute grid superimposed were used to define the "open country" sampling frame of clusters while census maps were used to define the "town" sampling frame of clusters. Cluster sizes were fixed at eight households and a serpentine procedure insured a standardized method of defining entry into each sample cluster. Wheelock, White and Phillips (1982: 6-7) affirmed the representativeness of the sample.

Adhering to this sampling procedure, the three counties randomly selected were Bertie (N = 96), Hoke (N = 64), and Warren (N = 89). The per capita income in 1970 for these counties were $2256, $2069 and $2293 respectively while the State per capita income average was $3252 (Profile: North Carolina Counties, 1977). Although the per capita income for these counties increased, respectively, to $6209, $4888 and $5320 in 1980, they are still in the lower one-third of the State's per capita income distribution. Specifically, of the 100 counties in North Carolina, Bertie has a rank of 71, Warren has a rank of 93 while Hoke has a rank of 100[1] (Survey of Current Business, 1982:63-64).

Variables

Expressed in Table 1 are the exogeneous variables used to examine community and life satisfaction.

(Table 1 about here)

It is apparent that the sample is almost equally divided between black and white respondents, 49.8% and 50.2%, respectively. These percentages are within two standard errors of the 1980 Census of Population (Wheelock, White and Phillips, 1982).

Determination of poverty status, a key variable in the regional study, is based upon methods developed by the Social Security Administration and the Department of Agriculture. The standard is based on a food budget estimated as an "economy food plan for emergency use" (Orshansky, 1965:6-8); the poverty level is set at three times the amount of the total food budget. In addition, adjustments of family annual income were made for family size and farm/nonfarm occupation of head of household. Given this definition, 45.5% (N = 107) of the sample respondents in these low income, rural counties were classified as "poor" and 54.5% (N = 128) were classified as "nonpoor." Recent statistics

suggest that 21.9% of the families in these counties are below the poverty level while 78.1% of the persons are above the poverty level [2] (Census of Population and Housing, 1980).

Over time, the Census of Agriculture has used varying definitions of a farm. For this study, the 1978 definition is used; that is, a farm is defined as a place from which $1000 or more of agricultural products were sold or normally would have been sold during the census year (Census of Agriculture, 1977). Based upon this definition, 24.9% (N = 59) of the sample were engaged in 'farm' occupations while 75.1% (N = 178) of the sample were engaged in 'nonfarm' occupations. According to census data, these percentages are 27.8 and 72.2, respectively (North Carolina State Government Statistical Abstract, 1979).

The measurement of the interval-level variables is also straightforward. Age (in years), education (highest grade completed), and occupation (see note - Table 1) are included in the analysis as covariates to remove the extraneous variability from the community and life satisfaction composite index. Table 1 shows that the average age of the sample respondents is 47.9 years, a value noticeably higher than the average age of persons in these counties reported in the recent census (28.6 years) [3] (Census of Population, 1980). In contrast, the difference between the average educational level for the sample (10.0) and the '80 census (9.9) is negligible. Similarly, there is less than a ten percent difference between the percentage of blue and white collar workers in the sample and the '80 census; the percentage of respondents employed in blue collar occupations are 77.6 (N = 180) and 68.3, respectively. In this analysis, however, occupation is treated as a metric, independent variable.

Finally, it would be remiss not to point out that the variables do not seriously violate the the multivariate, normal assumptions. That is, the variables adhere to the normality, linearity and homoscedascity assumptions, the

ranges are not restricted and the variances of the subgroups are homogeneous.

Procedures

The data analysis for this paper is two-fold. First, factor analysis is used as a data reduction technique to construct the community and life satisfaction index. Second, analysis of covariance is used to determine whether race, poverty status and farm status have an effect upon community and life satisfaction while adjusting for differences in age, education and occupation.

Factor analysis determines the "structure" or dimensionality of a set of variables drawn from the same conceptual domain and is based upon the fundamental assumption that some underlying constructs [factors] are responsible for the covariation among the observed correlations. This procedure facilitates the explication of constructs by partitioning variables into sources of common and unique variance. The common variance is determined by the creation of linear combinations of variables and the unique variance is that which is not accounted for by the common factors. Thereafter, these extracted linear combination of variables or factors are rotated to achieve simple structure, a parsimonious set of variables (Harman, 1967; Rummel, 1970 and Kim and Mueller, 1978). Thus, in this investigation, factor analysis is used as an expedient way of ascertaining the minimum number of constructs that can explain the covariation among the variables related to community and life satisfaction.

Analysis of covariance, an extension of the multiple regression model for analysis of variance, is applicable when the dependent variable is quantitative or metric, one independent variable likewise and another nominal or nonmetric. As such, it provides a straightforward method of adjusting for differences in concominant variables associated with a dependent variable. Most commonly, the concominant variables or covariates are incorporated into a design to remove the extraneous variation from the dependent variable, thereby

leading to a reduction in the error term and consequently to a more sensitive analysis. In such applications, the effects of the nonmetric variables or factors are of chief concern (Kerlinger, 1973; Wildt and Ahtola, 1978). This being so, differences in mean levels of community and life satisfaction for blacks and whites, poor and nonpoor and farm and nonfarm respondents are statistically assessed subsequent to the removal of extraneous variation due to age, education and occupational differences.

RESULTS

Intercorrelation of Variables

Of the 136 possible intercorrelations among the seventeen variables included in the refined factor analytic model, seventy percent (N = 95) are statistically significant at $\alpha = 0.001$. Given the large sample size, the significance of these correlations (including low correlations (0.18 - 0.24)) is to be expected.

(Table 2 about here)

Inspection of the correlation matrix reveals that positive relationships exist among these variables and that the relationships within two subsets of variables are higher than the relationships between the subsets.[4] In general, variables 1-12 tend to "hang together" while variables 13-17 tend to "hang together." This being so, one would expect at least two factors to be extracted with the first factor accounting for a large proportion of the total variation.

Results of the Factor Analysis

Community and life satisfaction, the dependent variable, was operationalized by using an index generated by factor analysis. The results of this analysis are summarized in a matrix of factor coefficients presented in Table 3.

(Table 3 about here)

Originally, twenty-five Likert-type attitude items, designed to tap a spectrum of community concerns, were used in the initial factor analysis.[5] Responses were coded on a five-point scale ranging from '5' (strongly agree) to '1' (strongly disagree). Positively and negatively worded items were transformed such that a high score would indicate a high degree of satisfaction and a low score would indicate a low degree of satisfaction. The means, along with their variability, are also provided in Table 2.

To determine the number of factors or constructs required to account for the covariation among these twenty-five items, common factor analysis was used. Employing the squared multiple correlation between a given variable and the rest of the variables in the matrix as communality estimates, seven factors were initially extracted. However, based on Kaiser's eigenvalue of greater than one and the scree test, it was determined that only two factors were theoretically meaningful. The eight variables that failed to load appreciably on any of the factors or had a factorial complexity larger than one were dropped from the analysis and the results are reported in Table 3.

An oblique rotation was used to achieve simple structure. As such, Factor 1 accounts for 74.6 percent of the common variation among the variables while Factor 2 accounts for the remaining 23.6 percent of the variation. Variables 1-12 loaded significantly (0.40 or higher) on Factor 1 while Variables 13-17 loaded significantly on the second factor.[6] The communalities (h^2), indicating the weight of each factor in explaining the variables, are also given in Table 3. For example, the two factors account for twenty-four percent of the variation in Variable 1, thirty-seven percent of the variation in Variable

2, twenty-three percent of the variation in Variable 3, and so forth.

Once the variables are assigned to the factors with which they exhibit the closest linear relationship, the factors or constructs need to be identified. Based on the nature, magnitude and pattern of the loadings, Factor 1 is identified as a 'satisfaction' dimension while Factor 2 is identified as a 'social integration' dimension. The intercorrelation between these dimensions is 0.33, a value that suggests these factors are not orthogonal.

For the present study, the 'satisfaction' dimension, community and life, is used as a composite index (dependent variable) in the analysis of covariance. The Cronbach's alpha coefficient of reliability for this index is 0.84.

Results of Analysis of Covariance

Table 4 presents the means and standard deviations of the index of community and life satisfaction by the factors, race, poverty status and farm status.

(Table 4 about here)

Briefly, the data show that white, nonpoor and nonfarm respondents tend to have higher scores on the index than black, poor and farm respondents. These findings, save farm status, are consistent with the studies cited earlier.[7]

Before presenting the firdings pertaining to the covariance analysis, a synoptic discussion of the covariates is appropriate. The zero-order, product moment correlations between the covariates, age, education and occupation, and the community and life satisfaction index are respectively, -0.03, 0.34 and -0.05. Thus, only the variability in education ($p < 0.001$) has a significant effect on the index and the other two covariates could have been excluded from the analysis. Further, three individual factor-covariate interaction terms [age and race; age and poverty status; and occupation and poverty

status] are significant but unimportant to the objectives of this study. The reasons are twofold: [1] neither age or occupation are significant covariates; and [2] the procedure for multiple covariates suggests examining the effects of the covariates jointly (Null and Nie, 1981:16). When the latter was examined, the factor-covariate interaction was not statistically significant. Therefore, the model is additive.

Table 5A shows the source of variation, sum of squares, degrees of freedom, mean squares, F-ratios and probabilities associated with each F-ratio.

(Table 5A about here)

An examination of the data in the above table reveals that when the effects of the covariates are held constant, race and poverty status are found to have statistically significant differential levels on the index of community and life satisfaction. Consistent with the trends in Table 4, white and nonpoor respondents have significantly higher levels on the index. Farm status and the interaction effects do not achieve statistically significance. Note particularly that education is the only significant covariate.

In light of the preceding, a question of interest may be: Is race or poverty status more important as a source of variation in the index of community and life satisfaction. After performing the resulting F-test, a value of 1.22 (2.46/2.02) is not significant at $\alpha = 0.01$; thus, we have no evidence that the variation in the index due to race is significantly more important than the variation due to poverty status, and vice versa.

In short, these findings do not lend support to studies by Marans and Rodgers (1975), Jesser (1967), Ladewig and McCann (1980), and Rojek et al (1975). A condensed form of the data in Table 5A appears in Table 5B.

(Table 5B about here)

(Table 6 about here)

The data in Table 6 shows the pattern of factor effects to the community and life satisfaction index. The unadjusted deviation is simply the mean of each category expressed as a deviation from the grand mean; whereas, eta^2 indicates the proportion of the variation in the index explained by each of the three factors. Thus, the mean value on the index for black respondents is 0.22 below the grand mean while the mean value for the white respondents is 0.20 above the grand mean. Poverty status and farm status are interpreted similarly. Further, race explains about twelve percent of the variance in the index; poverty status explains about thirteen percent of the variance, while farm status accounts for less than one percent of the variance.

As we adjust for the variation in the index due to the effects of the other factors and covariates, the deviations from the grand mean for race and poverty status are attenuated. This decrease suggests that these two factors are related in the context of community and life satisfaction. It shows that black respondents tend to be poor while white respondents tend not to be poor.

In scanning the multiple classification scores, it is important to note the pattern of changes in the effects of the variables. For example, there is initially a 42 unit difference between black and white respondents and a 43 unit difference between poor and nonpoor respondents. Some of this difference is because of the confounding effects of the other factors and probably differences in educational levels of the two racial and poverty status groups. When these effects are controlled, there remains a 32 and 29 unit difference respectively, and the deviations dropped, on the average, 10 units. The partial

etas are also attenuated. In comparing the partial etas with the original etas, these coefficients decreased an average of 13 units.

Finally, the multiple R of 0.47 indicate a moderate overall relationship between community and life satisfaction and the factors; twenty-two percent of the variation in the index is explained by the additive effects of the independent variables in the model.

SUMMARY AND CONCLUSIONS

The intent of this paper was to examine the effects of race, poverty status and farm status on community and life satisfaction while adjusting for differences in age, education and occupation. A factor analysis of a domain of twenty-five satisfaction variables resulted in two dimensions identified, respectively, as "community and life" and "social integration." The index of community and life satisfaction, the chief focus of this paper, was found to be reliable, a Cronbach's alpha of 0.84, and no attempt was made to define specific dimensions within the index. Statistically significant differences of means on the index were found for race and poverty status but not for farm status. To be specific, black and poor respondents tended to have lower levels of community and life satisfaction than white and nonpoor respondents. Further, education emerged as the only significant covariate while the interaction effects were found to be nonsignificant.

In general, the results of this study do not support the findings reported by the studies cited above. The "person characteristics" (race, poverty status and education) are highly significant on the index of community satisfaction while most of earlier studies noted the contrary. The findings pertaining to age and occupation are consistent with earlier studies while the latter omits

farm status. Finally, it is our belief that the present findings are not artifacts of the data but reflect genuine relationships between community satisfaction and these socio-economic variables. The difference may be attributed to the items comprising the index, or employing a general, instead of a specific, index; nonetheless, additional study is needed and a replication of this study on the regional data set, or the individual state data sets, would be a good start.[8]

NOTES

1. The per capita income average for North Carolina in 1980 was $7,832.

2. This percentage is low because of differences in sampling frames. The census included both urban and rural areas, while the sample excluded the former. Rural areas have been shown to have more persons below the poverty threshold.

3. The relatively large sample standard deviation may account for this difference.

4. Three negative loadings (Variable 14 with Variables 6, 8 and 14) exist; however, they are negligible.

5. The eight items that failed to load on a dimension were: (1) Our schools do a poor job of preparing young people for life; (2) This community is very orderly and peaceful; (3) The Civil Rights Act of 1964 has made life better for people in this community; (4) Families in this community keep their children under control; (5) Most people here show good judgement; (6) Our high school graduates take an active interest in making this community a better place in which to live; (7) I feel very much that I belong here; and (8) Most people get their families to Sunday School or church on Sunday.

6. A factor loading indicates the relative importance of the variables to the underlying construct(s).

7. We were not able to find any studies that documented whether differences in community satisfaction exist between persons engaged in farm and nonfarm occupations.

8. The other states participating in this regional project are: Alabama, Arkansas, Florida, Georgia, Kentucky, Mississippi, South Carolina, Tennessee and Virginia.

REFERENCES

Campbell, Angus and P. E. Converse, 1972. The Meaning of Social Change. New York: Russel Sage Foundation.

Campbell, Angus, Phillip E. Converse and Willard L. Rodgers, 1976. The Quality of American Life. New York: Russell Sage Foundation.

Harman, H. H., 1967. Modern Factor Analysis. Chicago: University of Chicago Press.

Hull, C. Hadlai and Norman H. Nie, 1981. SPSS Update 7-9. New York: McGraw-Hill Book Company.

Jesser, Clinton J., 1967. "Community Satisfaction Patterns of Professionals in Rural Areas," Rural Sociology 32 (March): 56-69.

Johnson, R. L. and Edward C. Knop, 1970. "Rural-Urban Differentials in Community Satisfaction," Rural Sociology 32 (December): 544-548.

Kerlinger, Fred N. and Elazar J. Pedhazur, 1973. Multiple Regression in Behavioral Research. New York: Holt, Rinehart and Winston, Inc.

Kim, Jae-On and Charles W. Mueller, 1978. Quantitative Applications in the Social Sciences: Introduction to Factor Analysis. Beverly Hills: Sage Publications, Inc.

Ladewig, Howard and Glenn C. McCann, 1980. "Community Satisfaction: Theory and Measurement," Rural Sociology 45 (Spring): 110-131.

Marans, Robert W., and Willard Rodgers, 1975. "Toward an Understanding of Community Satisfaction," in Metropolitan America in Contemporary Perspective, Amos H. Hawley and V. P. Rock (eds), New York: Halstead Press.

Miller, Michael K. and Kelly W. Croder, 1979. "Rural-Urban Differences in Two Dimensions of Community Satisfaction," Rural Sociology 44 (3): 489-504.

Orshansky, Mollie, 1965. "Counting the Poor: Another Look at the Poverty Profile," Social Security Bulletin 28: 3-29.

North Carolina State Government Statistical Abstract, 1979. Division of State Budget and Management (Fourth Edition).

Profile: North Carolina Counties - 1977. Raleigh, N.C.: Department of Administration, Division of Budget and Management, Research and Planning Services.

Rodgers, Willard and Phillip E. Converse, 1975. "Measures of the Perceived Overall Quality of Life," Social Indicators Research 2 (September): 127-152.

Rojek, Dean G., Frank Clemente and Gene F. Summers, 1975. "Community Satisfaction: A Study of Contentment With Local Services," Rural Sociology 40 (Summer): 177-192.

Rummel, R. J., 1970. Applied Factor Analysis. Evanston, Illinois: Northwestern University Press.

United States Department of Commerce. Bureau of the Census. 1977 Census of Agriculture, 1: Part 33 North Carolina. Washington, D.C.: U.S. Government Printing Office, 1978.

United States Department of Commerce. Census of Population and Housing: 1980. Advance Estimates of Social, Economic, and Housing Characteristics PHC80-S2-35, North Carolina.

United States Department of Commerce. Census of Population: 1980. General Population Characteristics PC80-1-B35, North Carolina.

United States Department of Commerce. Survey of Current Business. Bureau of Economic Analysis, Vol. 62, No. 5 (May, 1982).

Wheelock, Gerald C., Randall P. White and Robert L. Phillips, 1982. "Sample Design and Multilevel Objectives: Ten Southern State Household Survey in Low Income, Rural Counties," paper presented at the Rural Sociological Society, San Francisco, California.

Wildt, Albert R. and Olli T. Ahtola, 1978. Quantitative Applications in the Social Sciences: Analysis of Covariance. Beverly Hills: Sage Publications, Inc.

Table 1

SOCIO-DEMOGRAPHIC VARIABLES USED TO EXAMINE COMMUNITY AND LIFE SATISFACTION[1]

Nominal Variables

	N	%
Race:		
Black	117	49.8
White	118	50.2
Total	235	100.0
(NR)	(14)	
Poverty Status:		
Poor	107	45.5
Nonpoor	128	54.5
Total	235	100.0
(NR)	(14)	
Farm Status:		
Farm	59	24.9
Nonfarm	178	75.1
Total	237	100.0
(NR)	(12)	

Interval Variables

	Mean	Standard Deviation
Age (N = 246)	47.9	16.5
Education (N = 244)	10.0	3.6
Occupation[1] (N = 232)	7.4	3.7

1. The occupational scale values were: 1-private household worker, 2-service worker (except private household), 3-farm laborer or farm foreman, 4-farmer or farm manager, 5-laborer (except farm), 6-transport equipment operative, 7-operative involved in manufacturing, 8-craftsman or foreman, 9-clerical or kindred worker, 10-sales worker, 11-manager or administrator and 12-professional, technical and kindred worker.

Table 2

PRODUCT MOMENT CORRELATION COEFFICIENTS AMONG COMMUNITY AND LIFE SATISFACTION VARIABLES, MEANS AND STANDARD DEVIATIONS

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	X	S.D.
1. Real friends are hard to find in this community.	-	.41	.22	.29	.40	.23	.15	.27	.26	.28	.31	.15	.11	.07	.12	.07	.18	3.29	1.13
2. A lot of people here think they are too nice for you.		-	.29	.29	.44	.35	.20	.37	.36	.37	.32	.26	.23	.04	.19	.14	.14	3.49	1.02
3. The main problem in this community is crime.			-	.17	.33	.27	.21	.23	.21	.30	.31	.32	.14	.01	.08	.10	.03	3.51	0.98
4. Some people can get by with almost anything while others take the rap for any little misdeed.				-	.51	.26	.23	.39	.29	.16	.21	.10	.11	.01	.08	.09	.12	2.69	1.02
5. Most people try to use you.					-	.35	.34	.62	.38	.28	.31	.30	.19	-.06	.19	.10	.04	3.03	1.11
6. It is dangerous to walk down the streets in this community.						-	.20	.28	.19	.20	.26	.34	.19	-.08	.08	.07	.03	3.56	0.93
7. This community lacks real leaders.							-	.30	.27	.23	.25	.22	.17	.06	.04	.12	.02	2.85	0.92
8. People here give you a bad name if you insist on being different.								-	.51	.26	.27	.38	.27	-.02	.21	.18	.13	3.00	1.03
9. A few people here make all the money.									-	.28	.87	.31	.23	.09	.21	.29	.22	3.31	0.98
10. You must spend lots of money to be accepted in this community.										-	.92	.22	.14	.21	.23	.14	.16	3.70	0.86
11. No one seems to care how this community looks.											-	.35	.29	.10	.14	.30	.29	3.58	0.86
12. I am often afraid that criminals will break into my home.												-	.24	.13	.12	.06	.18	3.06	1.10
13. Different churches here cooperate well with one another.													-	.16	.34	.42	.31	3.81	0.76
14. Our schools do a good job in preparing students for college.														-	.18	.23	.25	3.49	0.84
15. Blacks and whites get along well in this community.															-	.30	.27	3.81	0.66
16. The churches here are a constructive factor for better community life.																-	.47	3.89	0.66
17. I feel welcome going to public activities in this community.																	-	3.89	0.60

Table 3

ROTATED FACTOR PATTERN MATRIX FOR COMMUNITY AND LIFE SATISFACTION VARIABLES[1]

Variables	Rotated Factor Loadings		
	F_1	F_2	h^2
1. Real friends are hard to find in this community.	.48	- .01	.24
2. A lot of people here think they are too nice for you.	.59	.05	.37
3. The main problem in this community is crime.	.49	- .04	.23
4. Some people can get by with almost anything while others take the rap for any little misdeed.	.56	- .10	.28
5. Most people try to use you.	.83	- .17	.63
6. It is dangerous to walk down the streets in this community.	.56	- .06	.25
7. This community lacks real leaders.	.43	.02	.19
8. People here give you a bad name if you insist on being different.	.70	- .01	.48
9. A few people here make all the money.	.51	.21	.37
10. You must spend lots of money to be accepted in this community.	.41	.19	.25
11. No one seems to care how this community looks.	.43	.30	.36
12. I am often afraid that criminals will break into my home.	.45	.12	.25
13. Different churches here cooperate well with one another.	.16	.49	.32
14. Our schools do a good job in preparing students for college.	- .09	.42	.15
15. Blacks and whites get along well in this community.	.12	.40	.21
16. The churches here are a constructive factor for better community life.	- .01	.68	.46
17. I feel welcome going to public activities in this community.	- .02	.64	.41
Variance Explained	74.6%	23.6%	

1. An oblique rotation was used to achieve simple structure and there was a 0.33 product-moment correlation between F_1 and F_2.

Table 4

MEANS AND STANDARD DEVIATIONS OF THE COMMUNITY AND LIFE SATISFACTION INDEX BY RACE, POVERTY STATUS AND FARM STATUS[1]

	Mean	Standard Deviation
Race:		
Black	3.03	0.63
White	3.46	0.48
Poverty Status:		
Poor	3.10	0.62
Nonpoor	3.45	0.51
Farm Status:		
Farm	3.16	0.69
Nonfarm	3.27	0.57

1. The grand mean and standard deviation for the sample were, respectively, 3.27 and 0.60.

Table 5A

ANALYSIS OF COVARIANCE FOR COMMUNITY AND LIFE SATISFACTION WITH RACE, POVERTY STATUS AND FARM STATUS CONTROLLING FOR AGE, EDUCATION AND OCCUPATION

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F	Significance Level
Total	67.58	189	0.36		
Covariates	8.07	3	2.69	9.20	.000
Education	7.71	1	7.71	26.36	.000
Occupation	0.36	1	0.36	1.23	.269
Age	0.25	1	0.25	0.84	.361
Main Effects	6.67	3	2.23	7.61	.000
Race	2.02	1	2.02	6.91	.009
Poverty Status	2.46	1	2.46	8.41	.004
Farm Status	0.22	1	0.22	0.74	.390
Two-Way Interactions	0.42	3	0.14	0.48	.697
Three-Way Interactions	0.06	1	0.06	0.20	.654
Error	52.35	179	0.29		

Table 5B

ANALYSIS OF COVARIANCE FOR COMMUNITY AND LIFE SATISFACTION WITH RACE, POVERTY STATUS AND FARM STATUS CONTROLLING FOR AGE, EDUCATION AND OCCUPATION: CONDENSED MODEL[1]

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F	Significance Level
Model	14.75	6	2.46	8.51	.000
Error	52.83	183	0.29		
Total	67.58	189			

1. Since the interaction terms were not significant, they were pooled into the error component.

Table 6

MULTIPLE CLASSIFICATION ANALYSIS OF COMMUNITY AND LIFE SATISFACTION BY RACE, POVERTY STATUS AND FARM STATUS

Variable	Unadjusted Deviation[1]	Eta	Adjusted Deviation[2]	Eta
Race:				
Black	- .22	.35	- .12	.20
White	.20		.11	
Poverty Status:				
Poor	- .25	.36	- .17	.24
Nonpoor	.18		.12	
Farm Status:				
Farm	- .08	.08	- .06	.06
Nonfarm	.03		.02	

1. Deviation from the grand mean (3.27).

2. Deviation adjusted for the factors and covariates.

Multiple R: 0.47

R^2: 0.22